

Glossary

Aquatic Nuisance Species (ANS)

Water-borne plants or animals that pose a threat to humans, agriculture, fisheries, and/or wildlife resources.

Area of Concern (AOC)

Areas of the Great Lakes identified by the International Joint Commission as having serious water pollution problems requiring remedial action and the development of a Remedial Action Plan. AOCs are defined in the Great Lakes Water Quality Agreement as: “a geographic area that fails to meet the general or specific objectives of the Great Lakes Water Quality Agreement, or where such failure has caused or is likely to cause impairment of beneficial use or of the area’s ability to support aquatic life.” Initially, there were 43 AOCs in the Great Lakes Basin.

Area of Stewardship

An Area of Stewardship watershed focus is an area, most often a watershed, for which a level of ecosystem integrity has been established as a goal and where an integrated, multi-organizational initiative or partnership is actively working to achieve that goal. The Lake Michigan Watershed Academy is being established to promote the concept of stewardship. Examples of such areas include the Chicago Wilderness, the Kalamazoo Multi-Jurisdictional Watershed Agreement, and the work in Grand Traverse Bay, Michigan and Door County, Wisconsin.

Basin

The land area that drains into a lake or river. This area is defined and bounded by topographic high points around the waterbody.

Beneficial Use

The role that the government decides a waterbody will fulfill. Examples of these uses include healthy fish and wildlife populations, fish consumption, aesthetic value, safe drinking water sources, and healthy phytoplankton and zooplankton communities. Restoring beneficial uses is the primary goal of the Remedial Action Plans for the Areas of Concern and of the Great Lakes Water Quality Agreement.

Beneficial Use Impairment

A negative change in the health of a waterbody making it unusable for a beneficial use that has been assigned to it. Examples of the 14 use impairments designated in the Great Lakes Water Quality Agreement include: restrictions on fish and wildlife consumption, beach closings, degradation to aesthetics, loss of fish and wildlife habitat, and restrictions on drinking water consumption. Local use impairments occur in Areas of Concern or other areas affecting the lake. Regional use impairments occur in an Area of Concern cluster or multi-jurisdictional watershed. Open water or lakewide impairment is a condition of pervasive impairment.

Binational Executive Committee (BEC)

The Binational Executive Committee (BEC) is a high-level forum composed of senior-level representatives of the USPC and Canadian counterpart agencies who are accountable for delivering major programs and activities to fulfill the terms of the GLWQA. The BEC derives its mandate from the provisions of the GLWQA which relate broadly to notification, consultation, coordination, and joint activity. In particular, Article X specifies the commitments of the Parties to consultation and review: “The Parties (U.S. and Canada), in cooperation with State and Provincial Governments, shall meet twice a year to coordinate their respective work plans with regard to the implementation of this Agreement and to evaluate progress made.”

Biological Integrity

The ability of an ecosystem to support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to the best natural habitats within a region.

Boundary Waters Treaty

The international treaty between the United States and Great Britain signed on January 11, 1909, regarding the waters joining the United States and Canada and relating to questions arising between the two nations. It gave rise to the International

Joint Commission and the Great Lakes Water Quality Agreement.

Buffer Strips

Vegetated buffer strips along waterways act as filters for sediment, nutrients and pesticides that are washing off the land heading for the nearest stream. They are often wetlands that can also mitigate flood water movement and serve as habitat for wildlife.

Cladophora

A natural occurring macroalgae found predominantly along the coast. Large blooms lead to unsightly and foul-smelling beaches and have negative health and economic consequences. The blooms can result in reduced drinking and swimming water quality. Possible causes include increased nutrient inputs, increased water clarity and /or temperature and changing lake levels.

Conservation Easement

A conservation easement is a deed restriction placed on a piece of property to protect resources associated with that parcel, sometimes irrevocable. It can cover a whole parcel or be for a stream bank or lake shore. The easement is often held by government entities while land owners receive tax reductions or other payments

Criteria Pollutants

A group of air and water pollutants regulated by the EPA under the Clean Air Act and Clean Water Act on the basis of criteria that includes information on health and environmental effects. Criteria pollutants include particulates, some metals, organic compounds, and other substances attributable to discharges.

Critical Pollutant

Chemicals that persist at levels that are causing or could cause impairment of beneficial uses lakewide. The Lake Michigan LaMP has identified six critical pollutants: PCBs, dieldrin, chlordane, DDT and its metabolites, mercury, and dioxins/furans. See also Great Lakes Critical Pollutants. Related program: Lakewide Management Program.

Designated Uses

The role that a waterbody is slated to fulfill, such

as a drinking water source. Uses are specified in water quality standards for each waterbody or segment, whether or not the current water quality is high enough to allow the designated use. Other typical uses of a waterbody include propagation of fish and wildlife, recreation, agriculture, industry, and navigation.

Ecosystem

A biological community and its environment working together as a functional system, including transferring and circulating energy and matter. It is an interconnected community of living things including humans, and the physical environment with which they interact.

Ecosystem Indicator

An organism or community of organisms that is used to assess the health of an ecosystem as a whole. When tracked over time, an ecosystem indicator provides information on trends in important characteristics of the system. Also known as an environmental indicator.

Ecosystem Integrity

A measure of the capacity of ecosystems to renew themselves and continually supply resources and essential services. Ecosystem integrity is the degree to which all ecosystem elements-species, habitats, and natural processes-are intact and functioning in ways that ensure sustainability and long-term adaptation to changing environmental conditions and human uses.

Ecosystem Management

The process of sustaining ecosystem integrity through partnerships and interdisciplinary teamwork. Ecosystem-based management focuses on three interacting dimensions: the economy, the social community, and the environment. Ecosystem-based management seeks to sustain ecological health while meeting economic needs and human uses.

Emerging Pollutant

The Lake Michigan Lakewide Management Plan addresses emerging pollutants, which include those toxic substances that, while not presently known to contribute to use impairments or to show increasing loadings or concentrations, have characteristics that indicate a potential to impact

the physical or biological integrity of Lake Michigan. These characteristics include presence in the watershed, ability to bioaccumulate, persistence (greater than 8 weeks), and toxicity. Emerging pollutants include atrazine, selenium, and PCB substitute compounds.

End Point Subgoal

End point subgoals describe the desired levels of ecosystem integrity and ecological services required to restore beneficial uses and provide for healthy human natural communities in the basin.

Fish Consumption Advisory (FCA)

An advisory issued by a government agency recommending that the public limit their consumption of fish. Advisories are issued to limit exposure to toxic substances in the fish that have the potential to impact human health. A fish consumption advisory is prepared annually by each state. Fish caught from selected lakes and streams are tested for toxic substances.

Great Lakes Water Quality Agreement (GLWQA)

An international agreement signed by the United States and Canada in 1972 and updated in 1978 and 1987. The Agreement seeks to restore and maintain full beneficial uses of the Great Lakes system. Language committing the two nations to virtually eliminate the input of persistent toxic substances in order to protect human health and living aquatic resources was included when the Agreement was updated in 1978. The philosophy adopted by the two governments is zero discharge of such substances.

Habitat

That space that is or can be successfully occupied (inhabited) by a species or biotic community or some broader (taxonomic or phylogenetic) entity. Habitat is simply the place where an organism or group of closely related organisms live.

Lake Michigan

Lake Michigan is the only one of the five Great Lakes wholly within the U.S. border. It is bounded by the states of Michigan, Indiana, Illinois, and Wisconsin. It is connected with and flows into Lake Huron through the Straits of Mackinac.

Lake Michigan Basin

Used to describe Lake Michigan and the

surrounding watersheds emptying into the lake.

Lake Michigan Lakewide Management Plan (LaMP)

This document is both a reference document and a proposal for a process that will guide remediation of past errors and the achievement of sustainable integrity of the basin ecosystem. It contains clear, comprehensive goals, specific objectives, a strategic plan, and a system of indicators and monitoring for use in judging environmental status and effectiveness of current actions.

Lake Michigan Management Committee (LMMC)

The LMMC guides the overall development and implementation of the Lake Michigan LaMP. The current membership includes: EPA (Lake Michigan Team, Great Lakes National Program Office, and Office of Research and Development), U.S. Fish and Wildlife Service, Army Corps of Engineers, U.S. Geological Survey, U.S. Department of Agriculture (Natural Resources Conservation Service), Illinois Environmental Protection Agency, Indiana Department of Environmental Management, Michigan Department of Environmental Quality, Wisconsin Department of Natural Resources, Great Lakes Fishery Commission, Chippewa/Ottawa Treaty of Fishery Management Authority, and the Grand Traverse Band of Ottawa and Chippewa Indians, Michigan.

Lake Michigan Mass Balance Study (LMMB)

This mass balance research project begun in 1994 is part of the Lake Michigan Lakewide Management Plan and is designed to develop a sound, scientific base of information that will guide future toxic pollutant load reduction and prevention activities.

Lake Michigan Monitoring Coordinating Council (LMMCC)

The Council provides a forum for identifying gaps and establishing monitoring priorities, exchanging information, and forming partnerships. It responds to the need for enhanced coordination, communication, and data management among the many agencies and organizations that conduct or benefit from environmental monitoring efforts in the basin.

LaMP Technical Coordinating Committee (TCC)

The TCC develops documents and programs, and

recommends strategies, goals, and objectives. The current membership includes the same agencies/entities as the Management Committee, plus the Oneida Tribe of Wisconsin. There is a steering committee and six subcommittees under the TCC.

Methyl Mercury

Any of several extremely toxic compounds formed from metallic mercury by the action of microorganisms and capable of entering the food chain. Methyl mercury is an organic form of mercury created when inorganic mercury is released into the environment where it volatilizes back to the atmosphere as a gas or as adherents to particulates. Methylmercury biomagnifies up the food chain as it is passed from a lower food chain level to a higher food chain level through consumption of prey organisms or predators.

Nutrients

Elements or compounds essential as raw materials for organism growth and development, such as carbon, nitrogen and phosphorus. If out of balance can cause impairment of waterways

Pressure-State-Response Approach

The pressure-state-response approach involves linking environmental indicators to stressors that impact the environment and to program activities. The use of this approach should promote consistency in the development and application of environmental indicators. It is an organizing framework used by U.S. EPA Region 5 in its "Guide for Developing Environmental Goals, Milestones and Indicators," found in LaMP Appendix H.

Remedial Action Plan (RAP)

These are federally-mandated local plans designed to restore environmental quality to Areas of Concern on the Great Lakes (there are 10 in Lake Michigan and there were initially 43 throughout the Great Lakes). The Areas of Concern were identified for their persistent pollution problems. Remedial Action Plans were called for by a protocol added to the Great Lakes Water Quality Agreement in 1987.

Sediments

soil particles that are or were at one time suspended in and carried by water as a result of erosion and /or suspension. The particles are

deposited in areas where the water flow is slowed such as in harbors, wetlands and lakes.

Stressor

Any chemical, physical, or biological entity that can induce adverse effects on individuals, populations, communities, or ecosystems and be a cause of beneficial use impairments. Examples of stressors include: pathogens; fragmentation and destruction of terrestrial and aquatic habitats; exotic nuisance species; nutrients; and uncontrolled runoff and erosion.

Sustainable Development

Sustainable development is the process of economic development to meet the needs of the present without compromising the ability of future generations to meet their own needs.

Total Maximum Daily Load (TMDL)

TMDLs are set by regulators to allocate the maximum amount of a pollutant that may be introduced into a waterbody and still assure attainment and maintenance of water quality standards.

U.S. Policy Committee

The U.S. Policy Committee is a forum of senior-level representatives from the Federal, State, and Tribal governmental agencies that share responsibility for environmental protection and natural resources management of the Great Lakes – to advance the restoration and protection of the Great Lakes Basin Ecosystem. U.S. Policy Committee Partners include the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Coast Guard, U.S. Department of Agriculture, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, U. S. Geological Survey, Agency for Toxic Substances and Disease Registry, U.S. Forest Service, Great Lakes Fishery Commission, Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, Wisconsin, Great Lakes Tribal Governments.

Water Table

The upper surface of the groundwater or that level below which the soil is saturated with water